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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------------|-------------|----------------------|---------------------|------------------|
| 10/734,723 | 12/12/2003 | Christophe Lero | RCIF 1002-2 | 1978 |
| 22470 | 7590 | 03/14/2006 | EXAMINER | |
| HAYNES BEFFEL & WOLFELD LLP | | | FOX, CHARLES A | |
| P O BOX 366 | | | ART UNIT | |
| HALF MOON BAY, CA 94019 | | | PAPER NUMBER | |

3652

DATE MAILED: 03/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/734,723 | LERO ET AL. | |
| | Examiner | Art Unit | |
| | Charles A. Fox | 3652 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>20041202</u> | 6) <input type="checkbox"/> Other: _____ |

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it is longer than 150 words and the language used is not in accordance with current USPTO guidelines. See the paragraphs above for guidance. Correction is required. See MPEP § 608.01(b).

The disclosure is objected to because of the following informalities: the proper heading are not presented for various sections of the specification. For example there is no heading "brief description of the drawings" and so forth. The specification is acceptable for initial review, but must be rewritten to conform to U.S. standards in response to this action. No new matter should be entered. Appropriate correction is required.

Claim Objections

Claim 1 is objected to because of the following informalities: the claim is more than one sentence long. Only a single period should be in the claim at the very end. For

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proper claim format see MPEP § 608.01 (i)-(p). In the rejections below the claim is treated as one claim with a period at the very end. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 4-6,8,9,12,13 and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 4 has the limitation of the wafers resting on the flats of the first and second arms. This is not supported by the specification, which has the wafers resting on tapered rollers in the usual manner. See page 6 lines 27-35 for a detailed outline of how the wafers are placed onto the instant invention. The dependent claims are also rejected as they contain all the limitations from a claim from which they depend.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Is the means for moving the wafer different from the mechanism for moving the pick ups? It appears the mechanism for moving the pickups

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relative to the opening is the same as the means for moving the wafer. If they are the same this claim is not further limiting of claim 1 from which it depends. A clear structural relationship between the various different means in the claims should be easy to develop from reading the claims but in this case is not definite as to what the means for moving the wafer includes. In the rejection below the means is treated as being any device for moving the wafer.

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Arms (6) and (7) lie in a horizontal plane in a side by side orientation and the aperture is oriented in a vertical plane. As such the arms and the aperture cannot have planes, which are parallel, but rather they will always be perpendicular no matter the position of the two arms. It is not clear what applicant is trying to claim in this claim and as such the claim has not been examined on the merits.

Claims 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitation of the three arms forming a plane parallel to the aperture is not entirely clear as the three arms are never oriented such that they form a plane. At most two of the three arms form either a horizontal plane or a vertical plane, but the three arms are never in a single plane together. In the art rejections below the plane in question is being treated as a vertical plane.

Claim 17 recites the limitation "the arresting system" in line 4. There is insufficient antecedent basis for this limitation in the claim. This limitation is not treated on the merits as it is not definite as to what this arresting system is referring to.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3,7,11,14,15,17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenquist et al. in view of Cheng and further in view of Whitcomb. Regarding claims 1-3,7, 14,15,17 and 18 Rosenquist et al. US 6,188,323 teaches a wafer loading device comprising:

a port for moving wafers into and out of a process device;

a shutter for opening and closing said port;

said shutter moving in a substantially vertical direction to open and close said port;

a wafer handling tool for moving wafers through said port;

wherein a wafer on said handler can be moved from one side of the port to a second side of said port;

a sensing device for sensing the presence of wafers and their relative thickness.

Rosenquist does not teach the type or location of said wafer handling device relative to the shutter. Cheng US 6,053,688 teaches a wafer handling device comprising:

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a shutter (152) for opening and closing a port;

a wafer pick up device (170) linked to said shutter;

said pick up device moves wafers by picking them up from their bottom surface.

Cheng does not teach picking the wafers up by their rim. Whitcomb US 6,468,022

teaches a wafer handling device comprising:

at least two arms (50a,50b);

rollers (21a,b,c)for engaging the edges of said wafer for handling thereof;

wherein said wafer can be reoriented via said rollers as needed;

wherein said drive roller is selectively engaged with said wafer and moves from an inactive position to an active position;

wherein said handler has a third arm (23) operatively attached to the said two arms. It would have been obvious to one of ordinary skill in the art, at the time of invention to provide the device taught by Rosenquist with a handling arm as taught by Cheng in order to simplify the device by having only one vertically moving assembly and to use rollers as taught by Whitcomb in order to allow the device to align a wafer as it is being moved into a process device thereby saving time via the concurrent alignment and moving steps.

Regarding claims 10 and 11 Rosenquist et al. further teach:

placing arms for a sensor such that in a first stowed position they lie in a vertical plane parallel to the plane of said shutter

wherein said arms are mounted on the top of said shutter;

wherein when in said first stowed position they lie between the two vertical planes extending from the two vertical sides of the shutter. It would have been obvious to one of ordinary skill in the art, at the time of invention to place any device for extending into the wafer carrier on the top of the shutter as taught by Rosenquist in order to simplify the device by using only one vertical movement assembly, thereby reducing the cost of building and maintaining the device.

Response to Amendment

The amendments filed on December 2, 2004 have been entered into the record.

Allowable Subject Matter


Claim 4 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The allowable subject matter lies in the first and second arm changing position to grip a wafer from a side by side stowed position. If claim 4 is written in independent form along with specific relationships between the stowed and active positions and how they relate to a wafer as well as all the limitations of claim 1 the claim should be in condition for allowance. The way the claims are written now, they are vague and cannot be allowed until the objections and rejections raised above are addressed.

The prior art made of record and not relied upon, but considered pertinent to applicant's disclosure is: Luecke 1992, Lee et al. 1998, Anderson et al. 1998, Carano 2001 and Govzman et al. 2002.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles A. Fox whose telephone number is 571-272-6923. The examiner can normally be reached between 7:00-4:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen D. Lillis can be reached at 571-272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Charles A. Fox
Examiner
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